3.1 Aviation

Safety Initiatives in Place Prior to Review
The current Aviation Operations and Safety program began with the Aviation Safety and Operations Review of 1998, initiated because of a series of aircraft accidents, some with fatalities, in WS aerial operations. That review provided recommendations, and suggested resources for improving the WS Aviation Program. When this current safety review began in June 2007, the products and programs based on the 1998 review in place were as follows:

- Appointment of a Flight Instructor Training Officer (FITO) in 1999 to develop and implement aviation training and standardization program. This position provided the standards and training curriculum to which agency pilots and contract pilots must perform.
- Establishment and hiring of the following positions to enhance safety and operations:
    - Aviation Safety Manager
    - Aviation Maintenance Officer
    - Helicopter Specialist
- Appointment of a National Aviation Manager (NAM) to implement agency operating and safety programs and policy (2002).
- Aviation Training and Operations Center (ATOC) opened in Cedar City, UT, (2004) to further WS aviation standards and safety.
- Aviation Operations Manual and Aviation Safety Manual revised, published, and implemented (2004) to provide guidance and direction for aviation operations.
- Aviation accident investigation practices and procedures implemented to find causes of accidents, and how to prevent the incident/accident from reoccurring (2006).
- Appointment of a National Aviation Coordinator (NAC) (2007).

The WS Aviation Program has been growing and evolving since the earlier mentioned 1998 review. The WS Aviation Training and Operations Center has become the low-level aviation authority in the U.S., by providing high quality training, standardization, and most of all, guidance for safe job performance. The Aviation Program's goal is to provide WS employees the ability to do their assigned tasks safely with the best equipment available.

Review Activities
Review of the WS aviation program was conducted by the Interagency Committee on Aviation Policy (ICAP). The ICAP review team included representatives of the Federal Aviation Authority (FAA) and the General Services Administration (GSA), Aviation Management Program. During the review, ICAP representatives examined all WS Directives, documents and manuals relating to management and operations, training requirements and curricula and training records, maintenance records procedures, and aviation safety procedures. The ICAP team also interviewed

representatives of WS management, pilots, administrative personnel, maintenance personnel and contractors. As part of the review the ICAP team spent four days at the WS ATOC, and conducted an on-site inspection of one aircraft maintenance facility.

Summary of Review Findings

The U.S. Department of Agriculture, Animal and Plant Heath Inspections Service, Wildlife Services program operates in accordance with applicable Federal Aviation Regulations (FAR Part 91, Part 43, etc.), Public Law, and the Code of Federal Management Regulations (FMR 102-33) that pertain to a federal agency aviation operation. There are WS program manuals, policies, and procedures in place designed to effectively manage the organization. It is the opinion of the Aviation Resource Management Survey (ARMS) Team that the WS aviation program is being operated in a safe, efficient, and effective manner. The WS aviation program meets the requirements of the ICAP Gold Standard Certificate program.

The WS aviation program provides capable, mission-ready aircraft and professional crews trained to conduct the WS mission wherever and whenever required. Some of the aviation missions the WS carries out include population reduction, bird and mammal surveys, delivery of oral rabies vaccines, predator control, and training. Wildlife Services conducts these missions by using helicopters and fixed-wing aircraft. Wildlife Services operates in 28 states using 74 agency-owned, contactor-owned and -operated, and "exclusive use" leasing aircraft. The WS flight crews are required to conduct missions that include demanding flight regimes. The central WS training facility is located in Cedar City, Utah, and this center supports WS operations in each state.

The following is a general summary of the WS aviations operations that the ARMS Team evaluated during the survey.

Management and Administration

It is the opinion of the ARMS team that WS has an appropriately defined organizational structure in place that is staffed with trained, qualified and experienced personnel. It is clear that WS has put significant effort into establishing an aviation management structure that conforms to the requirements contained in FMR 102-33.

During the course of the evaluation, ARMS members interviewed numerous management, support, and administrative personnel. The interviews regarding management were positive. Overall morale of the staff seems good.

The system seems to be working well for WS. Managers felt they had appropriate input into the planning and budget process. All felt their program needs were being met. All managers and supervisors with budget responsibility were especially happy with their autonomy in dealing with their budgets, programs and challenges. A high degree of team effort was noted between the various program managers in dealing

with budget issues and needs. Wildlife Services appears to be proactive in its fleet planning with an active and recurring effort to review and evaluate its mission and program. Overall, indications are that management enjoys the confidence and support of the employees.

Training

Wildlife Services has an established flight training program. The majority of the initial and recurrent training is conducted at the Aviation Training and Operations Center (ATOC) located in Cedar City, Utah. The training facility is staffed with a minimum of qualified personnel to accomplish the training mission. The ATOC manager has developed an effective training curriculum using a set of manuals, simulators and training devises that provide outstanding quality training that is geared to the specific tasks of the WS pilot and crewmember. The training promotes safety through standardization. Training records are maintained at the ATOC facility both hard copy and electronically. A review of the records indicates that they are well maintained, accurate and complete. All personnel interviewed indicated that the training has improved dramatically over the past few years and gave it high marks for effectiveness, timeliness, and applicability. The training operation is considered to be outstanding.

Safety Management Administration

The WS aviation safety program is detailed in the WS Aviation Safety Manual. The WS Aviation Safety Officer (ASO) manages the aviation safety program. The aviation safety program meets all requirements of the Federal Management Regulation (FMR) 102-33 180 thru .185.as well as FMR 102-33.445 and .450. It is operating in an effective manner with all required elements required of a successful aviation safety program.

Operating Procedures, Manuals, and Directives

The WS Aircraft Operations Manual (2004) is used by all aviation and management personnel to conduct flight operations. The manual is currently under revision and requires only minor changes to bring it up to standards required by the Federal Management Regulation, Federal Aviation Regulations, and WS Directives. Wildlife Services State Directors also issue state directives to augment the Aircraft Operations Manual.

Operations Records

The pilots training and certification records are being maintained in several locations within WS. From interviews and discussions, the records appear to be maintained in accordance with the FMR and Federal Aviation Regulations (FAR). Flight time records being maintained appear to be accurate and complete.

Flight Operations

The WS flight operations are highly decentralized and located in rural areas close to the locations in which they conduct their flight operations. This wide dispersal of flight operations was not conducive to practical observations by the ARMS teams.

However, one ARMS team member was able to observe the flight operations of a contract operator in Oral Rabies Vaccination operations being conducted in Junction, Texas, on January 17, 2008. Interviews and reviews of manuals and WS directives lead the ARMS team to a good understanding of how flight operations are being conducted.

Maintenance Management

Wildlife Services aircraft maintenance management is addressed in the WS Aviation Operations Manual in a disjointed manner. There is no designated chapter in the Aviation Operations Manual that addresses maintenance procedures and no 'stand alone' General Maintenance Manual. However, all WS aircraft are required to have "a valid FAA Airworthiness Certificate" in accordance with the Aviation Operations Manual, Section B. It is assumed that every WS aircraft falls under a manufacturer's maintenance program, which includes FAA oversight. The ARMS Team reviewed the WS existing maintenance procedures and documents, applicable Title 14 Code of Federal Regulations (CFR), Federal Aviation Regulations (FAR), FAA Type Certificate Data Sheets (TCDS), and FAA Advisory Circular (AC) 00.1-1 Public Aircraft Operations, for the basis of determining the effectiveness and regulatory compliance of WS maintenance management. The survey included personal interviews with key WS maintenance personnel and contractors. It is the opinion of the ARMS Team that the aviation maintenance program is operating in a safe manner.

Wildlife Services requires all WS aircraft to be certified, maintained, and operated in accordance with all pertinent regulations and guidelines set forth by Aircraft Operations Center (AOC), International Civil Aviation Organization (ICAO), DOD, FAA, and Aircraft Manufacturers to the fullest extent practical. FAR Part 91 has been established as the minimum standard for maintenance and inspection of WS aircraft.

It appears that there is limited communication between the State Director, National Aviation Coordinator and field personnel on the airworthiness status of aircraft operated by the Program. It is also difficult to determine who has the oversight responsible for tracking aircraft times and scheduled inspections.

Refueling Facilities and Operations

The WS normally conducts in-house refueling services. There are procedures in the Aircraft Operations Manual under Section B-Flight Operations, B-9, Aircraft Refueling Procedures. Overall, aircraft refueling appears to be conducted in a safe manner with sufficient procedures in place as outlined in the operations manual.

Aviation Life Support Equipment (ALSE)

There is no formal WS "ALSE Program" in place. However, ALSE is worn by each WS pilot. Each pilot wears as a minimum, a helmet, nomex flight suit, nomex gloves, and leather boots. In addition, each aircraft carries an Emergency Locator Transmitter (ELT) and a survival kit. The ALSE equipment is stored in a central

location, distributed by APHIS personnel, and inspected on an annual basis as per the Aviation Operations Manual Section B-15.3.3. Any equipment that requires repair or replacement is done so at that time.

Physical Security

Wildlife Services addresses physical security in Directive 1650.2 (2/28/06) the APHIS Aviation Security Program. This directive directs WS personnel to conduct risk analysis for each mission as well as security procedures for aircraft, personnel, and facilities. The security program is a function of the Marketing and Regulatory Business Services, Employee Services Division (ESD), which conducts security reviews and issues security policy. The Directive states that the ESD Director is responsible for the functional management and leadership of the APHIS Aviation Security Program and the APHIS Aviation Security Officer is responsible for APHIS employees, aircraft, and facilities. The ATOC facility in Cedar City is equipped with video monitors, and key control, and the personnel are briefed and trained in USDA security requirements. Overall, the USDA security program is operating in an effective manner and is in compliance with FMR 102-33.

Aviation Accident Response Plan

Wildlife Services has aviation accident response plans for each State program and the USDA has an aviation accident response plan that appears to meet the requirements of the Emergency Response Plan that follows the procedures as suggested by the National Transportation Safety Board in the NTSB Federal Plan for Aviation Accidents Involving Aircraft Operated by or Charted by Federal Agencies (NTSB Plan).

The top priority recommendations made by the ICAP were as follows:

1. Management and Administration
    - The NAC, out of necessity, should be a qualified aviator. It may not be necessary, although highly desirable, that they have a background as an APHIS pilot, but they should definitely have aviation experience. It only stands to reason that an individual that is in a position to create and influence aviation policy have aviation experience. In the civilian world, this position would equate to a Director of Operations for an air carrier or air taxi operator. Federal Aviation Regulations (14 CFR Part 119) require that an individual in that position be a current line pilot in at least one aircraft that the operator operates. The position of NAC at USDA/APHIS/WS WS should be filled by a qualified aviator. This will give instant credibility to the position and to the safety and training programs.
2. Training
    - The ATOC has developed an outstanding training program that enhances safety in APHIS flight operations. Upper management should continue to support the training program with necessary financial and human resources that might be required for the ATOC to continue providing outstanding and effective training.

- For each course of training the ATOC should add a "Completion Standard." This would bring the training curriculums up to industry standards (14 CFR Part 141). In addition, it gives the student a complete understanding of what level of performance is expected of them at the completion of a module of training.
- The ATOC should develop a policy addressing how unsatisfactory ("U") item(s) on a check flight (pilot evaluation flight) will be processed. By establishing quantitative completion standards (see Recommendation 1 above) there is no question as to whether a pilot was successful or not. Also, remedial training and how many attempts to satisfactorily complete a maneuver should be addressed. The process should be included in the Aviation Operations Handbook which will become policy as it is signed by the Deputy Administrator. This policy would be a great benefit to human relations personnel should it become necessary to take action affecting an employee's employment status as the reason for the action is quantified and is no longer subjective. This is a standard policy in the air carrier industry.
- Wildlife Services should consider to hiring another full time Certified Flight Instructor (CFI) to the Cedar City training facility staff. This would alleviate scheduling and resource problems/issues created when the ATOC goes to a State Director to secure the services of one of his/her pilots who provide CFI services. An additional CFI would provide more timely checking (evaluating pilots during a flight) and enhance standardization and thus safety.

3. Aviation Life Support Equipment (ALSE)
   - APHIS should formalize the ALSE Program and designate an "ALSE Manager" who would be responsible for the ordering, tracking, distribution, inspection, and repair (or return to manufacturer) of ALSE equipment. This "ALSE Manager" would also be responsible for the evaluation of ALSE equipment and for developing policy for the use of ALSE equipment by APHIS/WS flight crew and personnel.
4. Operating Procedures, Manuals, & Directives / Maintenance Management
   - The Aircraft Operations Manual needs to be updated to incorporate changes contained in the WS Directive as well as other procedural changes that have been implemented and are being practiced by managers and pilots. This will bring it up to standards required by the FMR, FAR, and WS Directive.
   - Wildlife Services should revise Aviation Operations Manual Sections B, C, & J to reflect current guidelines/policy of WS operations
5. Management & Administration
   - APHIS should develop a planning document that outlines a budget and timetable for the purchase/replacement of aircraft. The plan should consider the cost of operating older aircraft versus newer aircraft as well as determine the appropriateness of a particular aircraft type for the terrain that it is to operate in. Aircraft that are identified as 'scheduled for replacement' should be considered as candidates for the General Services

Administration's ‘exchange/sale’ program. Older aircraft could be sold and the monies received could be used to purchase newer aircraft for the APHIS fleet.

Safety Review Coordinator comment: Shortly before this document went to the printer, the ICAP review team leader submitted the following recommendation via email.

In the safety review draft final report, it is stated that "WS should accept no less than industry standard" and WS should "...implement programs designed to make safety a common mindset and goal of all employees." The adoption of a Safety Management System (SMS) would go a long way in accomplishing those goals. The FAA is in the process of redesigning the National Airspace System (NAS). The program is referred to as "NexGen". Congress directed the Secretary of Transportation to establish a Joint Planning & Development Office (JPDO) in the FAA to manage work related to the Next Generation Air Transportation System (ATS). The JPDO has nine working groups -- Aircraft; Air Navigation Services; Airport; Environment; Global Harmonization; Safety; Security; Net-Centric Operations; and Weather. Government and industry representatives jointly co-chair each of the nine working groups. The Safety Working Group is emphasizing Safer Practices as an integrated, systemic approach to safety risk management through implementation of formalized Safety Management Systems (SMS) that incorporate safety data analysis processes. An SMS provides a systematic and deliberate approach to safety management in four key areas identified as safety policy, Safety Risk Management (SRM), safety assurance, and safety promotion. Safety management systems establish safety accountability at all organizational levels by using management principles, practices, and procedures geared towards the identification and control of risk and the promotion of a strong safety culture.

The FAA considers this an integral part of the NexGen ATS. They will first direct the certificated air carriers to adopt and implement the SMS approach. The FAA has already approached ICAP with the intent that ICAP play a pivotal role in the incorporation of SMS into the government aviation flight.